RIVERWAYS

Newsletter Spring 2002

A Publication of the Massachusetts Riverways Programs
Department of Fisheries, Wildlife & Environmental Law Enforcement, David M. Peters, *Commissioner*
Executive Office of Environmental Affairs, Bob Durand, *Secretary* • Jane M. Swift, *Governor*

Drought Watch Declared

Many of you may have heard news stories about and/or observed first-hand the fact that Massachusetts and adjacent states are currently experiencing a considerable moisture deficit. The recently established Massachusetts Drought Management Task Force, at its March 7th meeting (<http://www.state.ma.us/dem/programs/rainfall/dsreport.htm>), announced that "Drought Watch" status has been extended to cover the entire state (previously the Connecticut Valley, Central, and Northeast regions of the state were placed under a "drought watch" while the rest of the state remained in a less severe "drought advisory").

Massachusetts uses a drought severity index with five levels (Normal, Advisory, Watch, Warning, and Emergency) based on a combination of seven different indices that quantify different combinations of precipitation, soil moisture, evaporation, groundwater levels, crop moisture levels, fire danger, streamflow levels, and reservoir levels. "Drought Watch" status indicates that hydrologic conditions are favorable for the development of a more serious drought.

Although our current drought is getting some well deserved attention in the media, it is not the drought of the century yet, or even of the last 50 years; the drought of the 1960's was much worse from a precipitation deficit standpoint. So why all the fuss? Why did 21 groundwater-monitoring wells have new all-time lows in January of this year? Why was the Salem/Beverly water supply reservoir only 38% full at one point? Why are streamflows across the state at or near record lows for this time of year?

The answer is two-fold. First, the current drought is occurring at a time when rain and snowmelt are usually most abundant. Generally in late winter and early spring, precipitation and snowmelt raise groundwater and streamflow to their maximum levels. Some anadromous fish take this as their cue to begin their upstream journeys, while some resident fish move onto the flood-

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Staff gauge on Maple Meadow Brook in the Ipswich River headwaters showing dry streambed conditions.

Biodiversity Days 2002 May 31- June 3

Join in for a Fun and Educational Weekend

Bob Durand, Secretary of Environmental Affairs announces Biodiversity Days, May 31 - June 3, 2002. Biodiversity Days, sponsored by EOEA in partnership with a number of nature-oriented nonprofit and educational organizations, is sponsoring the third annual citizen Biodiversity Days, May 31 - June 3, 2002.

Biodiversity Days is a challenge to citizens to familiarize themselves with the wealth of animals and plant species with which we share our communities and to identify in each participating city and town at least 200 species. Participants will find, record and learn about the component species of flora and fauna in their home cities and towns and submit their data to a central database for use by the state and municipalities in conservation planning.

For more information or to find out about field trips visit the Biodiversity Web site at hhtp://data.massgis.state.ma.us/Biodiversity or call 617-626-1116.

Biodiversity Days 2002 is being sponsored by the Executive Office of Environmental Affairs in partnership with Regional Organizers: Athol Bird and Nature Club, Christopher Noonan, Connecticut River Watershed Council, Dana Duxbury-Fox, Incredible Animals, Island Alliance, Massachusetts Audubon Society (Broad Meadow Brook and South Shore Sanctuaries), Nature's Classroom of Massachusetts, Nashua River Watershed Association, Neponset River Watershed Association, Parker River Clean Water Association, and Sudbury Valley Trustees.

River Restore and Coldwater Conservation

Several years ago, adult Atlantic Salmon returning to the Westfield River were tagged and allowed to swim upstream of the mainstem dams. Don Pugh, at the time earning his graduate degree, tracked these individuals and recorded the first natural spawning of the legendary fish in over 150 years.

It all happened just downstream of the confluence of Yokum Brook and the West Branch of the Westfield River.

Yokum Brook Restoration

Over the past year, River Restore has been working cooperatively with the Town of Becket to ease the salmon's journey and increase the trout's habitat by removing and/or breaching Ballou and Silk Mill Dams to restore five miles of Yokum Brook's

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plain to forage and reproduce, amphibians lay their eggs in vernal pools and other intermittent aquatic habitats, and some water suppliers (like the Salem/Beverly water board) rely upon the typical late-winter/early spring abundance of water to fill their reservoirs. This year, groundwater and streamflows are setting new record winter lows even though the annual lack of precipitation is not as severe as some other years on record.

The second reason that the drought is particularly worrisome this year is due to longstanding and continuing human-caused hydrological alteration of our waterways and landscape. We continue to take water from rivers, streams, aquifers and elsewhere for public water supply, irrigation and other uses while at the same time reducing, through development, the ability of precipitation to recharge surface and groundwater levels. Even before the current drought began, some Massachusetts rivers and streams were already experiencing severely low water levels.

The headwaters of the Charles River dried up in 1995, as did the headwaters of the Sudbury several years later. The Ipswich River ceased flowing in three of the last six summers, and has even been observed flowing backward (in the direction of water supply wells). In many places throughout the state, outlet structures at reservoirs, lakes and ponds are routinely closed to shut off any flow, leaving downstream river and stream reaches (and their organisms and habitats) starved for water.

In other words, current land and water use practices are already resulting in adverse impacts to many rivers, streams and other hydric habitats. Combine this with a drought, and the result is likely to lead to serious ecological consequences. Droughts and other low-water events are especially stressful times for fish and other water-dependent organisms. Although most of these species have evolved to withstand a certain level of stress resulting from naturally occurring drought periods, water withdrawals and diversions for water supply or other purposes can significantly increase the duration, frequency and severity of drought conditions.

This artificially induced drop in water levels may lead to a marked decline in the quality and quantity of habitat for water-dependent species in rivers, streams, wetlands and other hydric ecosystems. Such an impact is likely to result in the demise of sensitive (and often the most ecologically significant) species, a key indicator of ecological health. This problem is further aggravated by the fact that new diversions or withdrawal points are often proposed to be located within the shrinking inventory of relatively unspoiled and uncontaminated areas which possess high ecological values and sensitivities.

What can we do to keep our rivers and streams flowing? Fortunately, there are many ways to restore and preserve natural streamflows. One of the most obvious is to use less water, thereby enabling more water to be retained in the natural environment where it is critically needed to sustain healthy aquatic and other water-dependent ecosystems. One of the main reasons why the Mass. Water Resource Authority's (MWRA)'s water supply system is in relatively good shape in spite of the drought is that water conservation and efficiency improvements adopted by the MWRA and its service population over the last fifteen years have resulted in a substantial decrease in water demand.

Another way to restore streamflow is to increase the amount of water that percolates into the groundwater, where it can eventually reemerge into streams and serve as the major component of streamflow during periods of low precipitation. Areas that are impervious to water, such as pavement and rooftops, prevent rain and snowmelt from seeping into the groundwater. By reducing the amount of impervious surface within the watershed, ground-

"7Q10": The Jargon Explained

If you follow river protection activities, you may have run into the term "7Q10" in discussions about water pollution or the quantity of water in rivers. The "7Q10" refers to the lowest consecutive 7-day streamflow that is likely to occur in a ten year period in a particular river segment. It is used by many states and the federal government in setting discharge limits in National Pollutant Discharge Elimination System (NPDES) water quality permits.

A permit will only be granted if the proposed amount of pollutant that will be discharged into a river will not significantly impair the designated uses, such as drinking or swimming, when the streamflow falls to the 7Q10 level. In other words, NPDES permit holders are restricted from discharging pollutants that would cause pollutant concentrations in the receiving water to exceed permit limits, even at very low (i.e. 7Q10) streamflow levels.

Although such a low streamflow value, roughly equivalent to a ten-year drought, is appropriately used in the context of limiting pollution discharges, the 7Q10 flow statistic is sometimes inappropriately claimed to represent an adequate streamflow for maintaining a healthy aquatic ecosystem, when in fact much higher streamflow levels are required. Minimum streamflows required for healthy aquatic ecosystems should be based on naturally occurring low-flow periods, and should be combined with requiring higher flows for naturally high-flow periods.

The 7Q10 flow should by definition only occur for one week out of every decade, not every year or longer than a week's duration. This latter situation is likely to be the outcome were the 7Q10 flow alone used as a minimum streamflow required to be maintained in streams affected by water withdrawals or flow manipulations by dams or outlet structures.

A 7Q10 flow is certainly better than no flow at all, but is still inadequate to sustain healthy riverine organisms and ecosystems. Rivers need natural flow regimes (seasonally higher flows, along with naturally lower flows that aren't pulled artificially down further by withdrawals, flow manipulations, etc.) in order to maintain proper fluvial morphology and high-quality riverine habitat. For more information on this subject, we recommend an article entitled "The Natural Flow Regime" (<http://www.fish.washington.edu/people/naiman/Watershed/readings/poff_flow.pdf>) or a similar-themed document prepared by The Nature Conservancy entitled "The Case for Natural Flow Variability in River Basin Management" (<http://www.freshwaters.org/pub_docs/natflow.pdf>), both of which are also obtainable in hard copy from the Riverways office.

water may be maintained at a level that will provide streamflow all year round.

Another way to restore streamflow is to manage reservoirs and other impoundments wisely. Dams should release some water downstream at all times, although the amount may vary with the seasonal patterns of the stream. Finally, streamflows may be restored by discharging treated wastewater in a manner that can help recharge the surface and/or ground water sources from which it was withdrawn.

Although a few water suppliers persist in downplaying the potential severity of the situation, most suppliers are painfully aware of the difficulties ahead in meeting the needs of their customers should the current dry conditions continue. This is where watershed associations, stream teams and other river advocates could (and **should**) reach out to water suppliers and offer to help them elevate the importance of water conservation and efficiency of use among their service population. Some water suppliers hesitate to impose outdoor watering restrictions, raise water rates or take other action to manage demand because they are concerned about a backlash among their customers. These water suppliers may wait until the situation is truly desperate (e.g., a severe water pressure drop in fire hydrants) before taking action. Unfortunately, however, the rivers, streams and other hydric habitats affected by water withdrawals have usually already ceased flowing or dried up well before the water supply itself is threatened.

We encourage you to work with your local water supplier(s) on efforts to convince water users of the importance of minimizing unnecessary water use for the direct benefit of human as well as natural communities. Certainly during a drought, where there may not be enough water supply to meet basic human needs such as drinking and bathing, choosing to refrain from watering your lawn and letting it go naturally brown and dormant is a public-spirited, community-minded act.

Please consider writing letters and/or guest editorials to your local paper(s) supporting the adoption of water conservation measures on the part of water suppliers and their customers and praising water-saving actions that are already taking place. A good list of household indoor and outdoor water-saving tips is posted on the Mass. Department of Environmental Management's Rainfall web page (<http://www.state.ma.us/dem/programs/rianfall/conserve.doc>).

In the meantime, if you are concerned about a particular river or stream which you believe to be experiencing abnormally low streamflow conditions due to water supply or irrigation withdrawals, dam operations or other reasons, Riverways' Watershed Ecologist Margaret Kearns can help your group document low flow conditions, devise a flow monitoring plan, and/or develop a streamflow restoration plan. Riverways has also begun to compile a statewide inventory of stream segments with low flow problems. We hope to use the information gathered from this project to raise awareness of the problem among water users, suppliers, and government officials and to help local communities document, monitor and restore natural flow regimes to their waterways. If you know of or suspect a stream with serious streamflow problems, please contact Margaret at (617) 626-1533 or <Margaret.kearns@state.ma.us>.

Citizen Training for Water Supply Protection Offered

Clean Water Fund (CWF)'s new program, ***Making Connections – From Watershed to Water Tap***, is offering training sessions for citizens on how to protect their watershed and sources of water supply. Participants in the trainings will learn how to use two existing tools to improve local watershed protection – the Consumer Confidence Reports (CCRs) their local water supplier is required to issue every July 1, and the Source Water Assessment Program (SWAP) reports. The SWAP reports, which DEP is preparing in partnership with municipal and other public water suppliers, delineate the sources of water supply and threats to water quality, and will provide recommendations for how to reduce the threats of contamination (see SWAP article in the Fall 2001 Riverways Newsletter for more info).

CWF organizes the trainings in cooperation with local watershed groups, stream teams, land conservation organizations, or other local citizen groups interested in watershed protection. The purpose of the trainings is to empower citizens to enable them to protect their watersheds and drinking water supplies, and to learn how to find out about the sources of their drinking water and potential contamination threats from the CCR and SWAP.

The training sessions take about 2 + hours. After a brief presentation by the local watershed group about local watershed issues, CWF reviews the CCR prepared by the local supplier. The CCR, if done properly, is a useful tool to inform the public about the sources of drinking water supply, what contaminants have been found in the drinking water, and what the sources of these contaminants might be. The strong and weak points of the CCR are pointed out, and other CCRs are discussed to show how their particular CCR could be improved.

CWF then reviews the SWAP program, which includes mapping of the watershed and/or aquifer areas of the water supply source and should identify all potential sources of contamination in those areas. CWF then discusses how citizens can get involved in their local SWAP program to help their local water supplier to accurately identify all potential sources of contamination and to implement the recommended actions identified in the SWAP plan to protect the water supply.

At breakout sessions that follow, attendees review maps that have been prepared in the local SWAP plan to see if they have accurately identified all potential sources of contamination and to discuss potential protection measures. If SWAP maps have not yet been prepared, they will review other GIS maps of the water supply areas to discuss what should be identified in the SWAP program when it is conducted. CWF will also provide informational materials to attendees which will handouts on SWAP and CCR, and a citizens' guide to grants for local watershed protection.

For more information, or to schedule a training session in your area, contact Chris Bathurst [(413) 584-9830, <cbathurst @cleanwater.org>], John McNabb [(781) 383-6202 , <mcnabbj @mindspring.com>], or Clean Water Action [36 Bromfield Street, Suite 204, Boston, MA 02108 (617) 338-8131].

Small Grants Leverage Work on Massachusetts Rivers

Riverways Small Grants are awarded for projects that restore wildlife and fisheries habitat, foster healthy stream flows and lead to the protection of river ecosystems and watersheds across the Commonwealth. The small amounts of funds provided by this program (1) enable municipalities, land trusts, watershed groups and non-profit watershed associations to carry out activities that protect and restore riverine natural resources; (2) create vast amounts of volunteer and in-kind services and matching funds to do needed projects for the river; (3) create partnerships between the Commonwealth and its citizens to make our rivers healthy and accessible for our own citizens and for visitors.

With funding provided through the 1999 Environmental Bond, the Riverways Programs funded eighteen different projects statewide. This year's awards highlight several main objectives of the Riverways Programs:

- increased access to and the protection of land along rivers,
- habitat restoration, and
- raising community awareness and building a constituency for rivers.

Increased Access and Protection

The **Town of Rowley** has been awarded $10,000.00 as contribution towards the *Pingree Farm Acquisition* along the Mill River in the Parker River Watershed. Supported in large part by Community Preservation funds, riparian forest, wetlands and water supply will all benefit from the this land purchase; consequently almost half the length of the Mill River will now enjoy some kind of permanent protection.

The **Sippican Land Trust** received $4,650.00 to support the *Sippican River Access Project*. The funds will help purchase land along the Sippican River in the Buzzards Bay Watershed, protecting the river and its corridor for the future and establishing public access on the river in the Town of Marion for passive recreation and monitoring of herring runs.

Groundwork Lawrence received $8,000.00 towards the *Spicket River Greenway Project* in the Merrimack River Watershed. The objective of this resident driven project is to reclaim, improve and redevelop the Spicket River and the surrounding land so that it is viewed as an amenity for this urban community. This effort emphasizes greenway linkages, riverfront parks and the opportunity for the residents not only to have access to the river, but to provide vision as to how the river could become a more valued resource.

The **North and South Rivers Watershed Association** has been awarded $5,000.00 for the *North River Mapping Project* in the South Coastal Watershed, focusing on the towns of Pembroke, Norwell, Marshfield, Scituate, and Hanover, which lie within the most rapidly developing area of the Commonwealth. The goal of the project is to create a parcel based map, overlaid on an orthophotograph of land along the North River, for use as a tool by towns and conservation organizations to prioritize parcels for acquisition or conservation restrictions, and thereby permanently protect the river. This grant award supports Phase I of the project to identify land ownership, acreage and land use. The mapping format lays the foundation for inclusion of additional information; habitat and species delineation will be added in Phase II.

Habitat Restoration

The **Friends of Alewife Reservation** has been awarded $2,000.00 to conduct *Habitat Surveys for the Alewife Reservation* in the Mystic River Watershed. There has been growing concern that information on existing wildlife is needed to protect the Reservation as a permanent wildlife refuge and environmental learning center. In response to that concern, this project will conduct both a both a tracking inventory of wild mammals and a survey of migratory and resident birds. The goals are to use the wildlife surveys as a planning tool for the City of Cambridge and the MDC as they begin the Master Planning process for the Alewife Reservation and to train of a group of docents to lead the public on "wildlife" walks in the reservation.

The **Athol Bird and Nature Club** received $2,000.00 for their *Photo-documentation Pilot Project* to monitor and assess habitats along the Tully River in the Millers River Watershed. Volunteers, including Stream Team members, will be trained to document river sections annually, resulting in site specific information that will show changes over time. In addition, the group has also been awarded $2,800.00 for their *Bioinventories and Enhancing River Access Project* along the main stem of the Millers River, the Otter River and the Tully River. Experts, working with teams of volunteers, will perform in-stream inventories of dragonflies, damselflies and other insects as well as invasive plant species from canoes. As part of these inventories, boat access points will also be investigated and contacts will be made with landowners in the hopes of negotiating easements to provide for more river access.

The **Town of Manchester** will continue the *SawMill Brook Smelt Habitat Restoration* this spring through a Small Grant of $2,000.00. The project, part of a larger project being funded from a Five Star Restoration Grant, focuses on restoring the fish run and fostering additional fish passage upstream. With the funding from Riverways, the town, along with Manchester Stream Team and Salem Sound 2000, will put in riparian plantings as a buffer for erosion as well as to provide shade and habitat for the fish.

The **Town of Becket** received $10,000.00 towards the *Breaching or Removal of the Ballou and Silk Mill Dams* along Yokum Brook in the Westfield River Watershed. The goal of the project is to eliminate barriers to Atlantic Salmon migration and resident trout movement and to restore continuity to the habitats located upstream and between the two dams. This project has been an ongoing partnership that includes the town, local residents, the

Silk Mill Dam, Yokum Brook, Becket. Photo by Joan Kimball.

Taconic Chapter of Trout Unlimited, and the Westfield River Watershed Team, state agencies such as Riverways River Restore Program, the Division of Fisheries and Wildlife, the Department of Environmental Management, the Department of Environmental Protection, and the Executive Office of Environmental Affairs, and the National Marine Fisheries Service, US Fish and Wildlife Service, US Geological Survey, the National Park Service and the Environmental Protection Agency. These funds will serve as in-kind match for the federal dollars funding this project.

The **Lowell Parks and Conservation Trust** has been awarded $6,375.00 for their *Concord River Alewife Restoration Project* in the SuAsCo River Watershed. The major goal of this project is to support the US Fish and Wildlife Service and the Massachusetts Division of Marine Fisheries to restore a breeding population of alewife to the Concord River. Lowell Parks and Conservation Trust will recruit and train volunteers, this spring, to monitor the return of spawning adult alewife and conduct an ecological inventory and habitat assessment with the Massachusetts Audubon Society.

The **Southeastern Massachusetts Chapter of Trout Unlimited** will be conducting their *Satucket River Restoration* project in the Taunton River Watershed, funded with a Small Grant of $879.00. Recently, due to the opening of a dam, (as required by the DEM Office of Dam Safety), the Satucket has become a free flowing stream for the first time in many years. The river currently supports a population of alewife, but TU is concerned that the water temperature is not cool enough to support trout. Trout Unlimited, with support from the Division of Fisheries and Wildlife, will monitor the temperature of the river over the course of at least one summer to determine if the Satucket's waters remain cool enough to support trout. If the monitoring shows the river now capable of supporting trout year round, Trout Unlimited wants to work with the appropriate government agencies to develop and promote a restoration plan. The temperature collection will also increase understanding of the changes that occur in the river when returned to a free flowing state for use in guiding strategies directed at fisheries restoration and protection of critical habitat.

The **Deerfield Millers Chapter of Trout Unlimited** will receive $5,000.00 for the *Atlantic Salmon Egg Rearing Project* in the Greater Connecticut River Watershed. The goal of this project is to help protect salmon in the early years of life in their fresh water habitat. Work will be done to increase local knowledge of salmon restoration efforts, and inspire stewardship among students in the community as well as increase the volunteer base. Trout Unlimited will hire a coordinator to work with participating schools and organize workshops and fry stocking events.

Constituency Building and Community Awareness

The **Great Barrington Land Trust** has been awarded $8,000.00 to create a *River Walk Raingarden* at the entrance to the Housatonic River Walk in Great Barrington. This stormwater enhancement project will illustrate how natural systems can help clean stormwater runoff from urban areas by creating a manmade wetland, planted with flowering wetland species, which will filter the water before it returns to the river. There will be signage to inform the public about the project and describe its measures for river protection.

Connecticut River Watershed Council received $3,296.00 towards their *Connecticut River Watershed Fisheries Restoration Program*. The Riverways Small Grant funds will be used to research and develop a community based process for implementing dam removals in Massachusetts, with a focus on the lessons learned in the Connecticut Valley. This research will be part of CRWC's larger guide for New England and will serve as a companion piece to the Greater Connecticut Watershed Team's Technical Dam Removal Guide, funded by the Massachusetts Watershed Initiative.

The Small Grants Program contributed $3,000.00 to **Saugus River Watershed Council's** *Campaign To Address Illegal Dumping* along the Saugus River and Town Line Brook. This campaign will be multi-faceted and include: identifying "hot spot" locations that have significant dumping activity, developing an action plan with site specific recommendations to prevent future illegal dumping, establishing and promoting a hotline for reporting illegal dumping, organizing community based clean-up projects to remove debris, educating the public about proper disposal of household and hazardous waste, and collaborating with public officials to promote and expand waste disposal programs in the watershed.

Hampshire Council of Governments received $8,000.00 towards the *Tilton Town Farm Stream Protection Project* in the Town of Goshen in the Connecticut River Watershed. This project serves as a pilot demonstration to alleviate continued stream degradation and promote water conservation by using composting toilets on land used mainly for recreational activities by town residents. The ultimate purpose is to educate the community about stream protection and water conservation efforts through signage along the farm boundaries, and to raise awareness about the importance of the first order stream on the property.

The **Fore River Watershed Association**, in collaboration with the Weir River Watershed Association and the Neponset River Watershed Association, has been awarded $8,000.00 for their *Constituency Building in the Fore, Weir and Neponset River Watersheds*. The Fore River Watershed Association will build a website to provide public information and education about the river and the watershed and the need for citizen involvement in its protection. The Weir River Watershed will research, write and design a brochure describing the watershed and its natural resources, the impacts of water withdrawals and other environmental threats, and ways that citizens can become involved in conserving water and protecting the river. The Neponset River Watershed Association will use funds to revise and update the "Explorer's Guide to the Neponset River Watershed", which will include new historic and access information, as well as updated maps.

The **Ipswich River Watershed Association** will be holding their first annual *Stream Team Conference* in the Ipswich River Watershed, partially funded by a Small Grant of $3,000.00. The group will organize a one-day conference, to both strengthen existing Stream Teams and recruit and introduce new members to the activities, responsibilities and opportunities generated by Stream Teams. Existing Stream Teams will be offered guidance in clarifying workplans and taking the necessary steps to implement activities identified by the Stream Teams as priorities.

The Riverways Programs extends its thanks to all the applicants who participated in this year's Small Grants Program. We received over thirty applications. Many new groups applied to the Program for funding, and the quality of the proposals was exceptional. Riverways looks forward to working with all these groups again in the future.

Urban Rivers Update

Urban River Forum

Riverways Programs has been working with river advocates since its inception nearly two decades ago. During these years, the programs have evolved and honed the tools and techniques available to concerned citizens, groups and communities to improve their rivers. Not surprisingly, the years have taught us that each river and each situation has unique assets and problems and we have strived to accommodate the diversity of challenges inherent in river protection efforts. Urban waterways illustrate how important it is to have a dynamic and flexible approach. Building a constituency around a stream is all the more difficult if it flows through a culvert buried beneath the ground or has been converted into a concrete lined swale. These are just some of the situations facing urban river advocates throughout the Commonwealth and why the annual Urban Rivers Forum is such an eclectic and lively event.

This past autumn over one hundred people gathered in the Department of Environmental Management's beautiful Fall River Heritage State Park over looking both the Quequechan and Taunton Rivers to learn from specialists and each other about urban river revitalization. The event was co-hosted by the local advocacy group Green Futures who have been working on a range of issues in the greater Fall River area for years. Green Futures was able to provide a brief overview of the history and challenges facing the city with a particular focus on the Quequechan River that flows, hidden, through downtown Fall River. The Forum presentation and discussion served as a precursor to a larger effort planned for this spring.

Veronica Eady, from the Executive Office of Environmental Affairs, presenting her workshop on environmental justice. Photo by Deb Olstein.

Success stories and inspiration were the theme of the day starting with a talk by architect William Warner. Mr. Warner was a principal proponent in the uncovering of the Providence River in Providence RI. The Providence River's rebirth is known world wide as one of the most successful efforts to revitalize a city using an urban waterway as the focal point. The Providence River now supports a hugely successful arts celebration that draws thousands of visitors to the city. An afternoon field trip to the river further reinforced the role of the river in the past and the future of Providence's vitality.

Several other cities and their successes were outlined during the workshop sessions. A vision for a greenway along the Spicket River demonstrated success despite daunting circumstances, thanks to the efforts of Groundwork Lawrence and an Urban River Fellow. Work on the Chelsea Creek Historical Walk by a Riverways' intern was well received and recognized as a means to reach another segment of possible river advocates. A summary by another Urban River Fellow demonstrated the value of Geographical Information Systems as a planning and assessment tool using the student's work on the Blackstone River as an example.

Several workshop leaders delved into weighty topics. The sources and health threats associated with water borne pathogens is almost a universal concern in urban rivers. A workshop ably led by the director of the state's testing lab covered the breadth of issues associated with microbial and toxic contamination. Other Forum attendees wrestled with the concept of environmental justice and the formidable task of creating a policy to attain environmental equity for all people. The environmental justice movement roots can be traced to activists angry that poorer communities bore disproportionate environmental burdens. Rectifying these injustices in areas where people often feel they lack power or a voice is challenging. The Forum was fortunate to also have a pair of seasoned environmental advocates offering advice on how to overcome obstacles based on their combined wisdom and experiences.

The worth of the Urban River Forum is far more than the sum of its workshops and field trips; an observation supported by the lively conversations, the crowds pouring over the many displays, and the exchange of contact information among people. The Forum brings together people from across the state with the shared interest and aspiration to reawakening their urban river.

If you would like a bit more information about the workshops and speakers at the 2001 Urban River Forum, please visit the Riverways web page and click on Urban Rivers for summaries of the workshops or contact the Urban Rivers Program if you need a printed copy or more information (617/626-1545).

Congratulations Urban Rivers Fellow

One of the goals of the Massachusetts Urban Rivers Action Program is to serve and involve more people from urban communities in enjoying their rivers as well as understanding the environmental and public health issues connected to their river. The other goal is to improve the water quality and habitat along our urban rivers. The Program acts as an information clearinghouse and provides technical, financial and other support to community efforts for urban river revitalization. To this end, the Urban Rivers Program offers Urban River Fellowships to graduate students to work on an ongoing project with a community partner.

We are pleased to hear that one of our most recent Urban River Fellows has been given an award for Outstanding Field Practice in the Environmental Health Department from the Boston University School of Public Health for her work on the Alewife Brook Trend Analysis. Andrea Blackburn worked with the City of Somerville's Environmental Health Team, the Urban Rivers Program and Dr. Patricia Hynes at Boston University to further the goals of the City to have an accurate and current report on the status of and the trends in water quality of the Mystic River system, particularly Alewife Brook. The information gathered and analyzed by Andrea was used in the Somerville Health Agenda 2000 report and to further the work of the City to improve the quality of the water resources in Somerville.

Congratulations Andrea!

Lake Watershed Stewardship Program

The new Lake/Watershed Stewardship Program is up and running! Our goals are to (1) help citizens find sources of water quality problems that prevent lakes and ponds from meeting water quality standards and (2) support grassroots planning and implementation of action plans that lead to restoration. This interactive program, a collaborative effort between DEP and Riverways Programs, is funded by the § 319 Nonpoint Source Program through the Department of Environmental Protection. The Program is part of the Lakes and Ponds Watershed Strategy, established by Bob Durand, Secretary of Environmental Affairs.

Modeled on the Riverways Adopt-A-Stream program, the Lake/Watershed Stewardship Program provides training to citizens to conduct visual surveys of their lake or pond's watersheds to look for problems, and facilitation for planning workshops that lead to action for cleaner lakes and healthier watersheds. New aspects of the Lake/Watershed Stewardship Program include:

- ❖ data sheets directed specifically for lake watersheds, lake tributaries and higher up in the watershed itself,
- ❖ DEP's new lake watershed manual, *Surveying A Lake Watershed and Preparing an Action Plan*,
- ❖ a Technical Advisory Committee (TAC) composed of experts from COLAP (Congress of Lakes and Ponds) Massachusetts Waterwatch Partnership, DEP, DEM, Lakes and Ponds Watershed Strategy, representative EOEA Team Leaders and Riverways Programs,
- ❖ an informal application process.

Now in its pilot stage, the Lake/Watershed Stewardship Program will focus on lakes that have Total Maximum Daily Loads (TMDLs), which are remediation plans for water bodies not meeting water quality standards. We will work with up to ten groups on TMDL lakes for the first 18 months. In the later stages, we will also train more trainers to expand the program.

Kickoff in the Blackstone Watershed

The Program will work with residents and watershed groups on (1) Leesville Pond watershed (2) Dorothy Pond watershed and (3) a "linked lakes" pilot, the Mill Brook watershed, including Indian Lake and Salisbury Pond. The local steering committees for each will gather together lake and tributary participants, members of each of the pond watershed associations and municipal officials to plan and guide the process at the local level. Team Leader Lynne Welsh, members of the TAC and DEP regional staff are supporting each of these efforts which will build on successful collaborative work of the watershed associations through the Blackstone Headwaters Coalition.

Background on the Program

Impaired Lakes and Ponds and their Watersheds

Massachusetts has over 3000 lakes and ponds; over 700 of these are listed as having impaired water quality on the 303 (d) list. Pollution from surface runoff is the largest contributor: to find the sources of runoff pollution means taking a close look at the watershed of the lake or pond. The Clean Water Act requires states to write Total Maximum Daily Loads, or TMDLs, for its impaired waterbodies on the 303(d) list. A TMDL is a pollution budget, which determines the amount of a pollutant entering the water, calculates the maximum the waterbody can receive and remain healthy, and develops a plan for reducing the inputs. Producing a lake or pond TMDL involves careful study of the in-lake conditions and a broad assessment of the watershed. Each of the Massachusetts lake and pond TMDLs recommends a visual survey to find causes of pollution, pathways of nutrients that are polluting the water bodies as well as finding solutions to the problems. These volunteer visual surveys will be a vital part of the restoration efforts.

Action Planning

In addition to providing training to conduct the visual watershed surveys, the Lake/Watershed Stewardship Program brings together experts to assist with technical and funding advice for follow up work from the survey. A facilitated action planning meeting will help residents turn their results into an action plan for better restoration and protection. The action plan and other important information from the survey are compiled in Watershed Survey Reports that can be used by Conservation Commissions, agencies and other planning authorities and by the survey participants themselves in seeking funding to implement remediation plans.

To find out more about the program, contact Chris Carney, coordinator, at 617 626-1547 or by e-mail at christopher.carney @state.ma.us. You can also find more information on our website at www.massriverways.org.

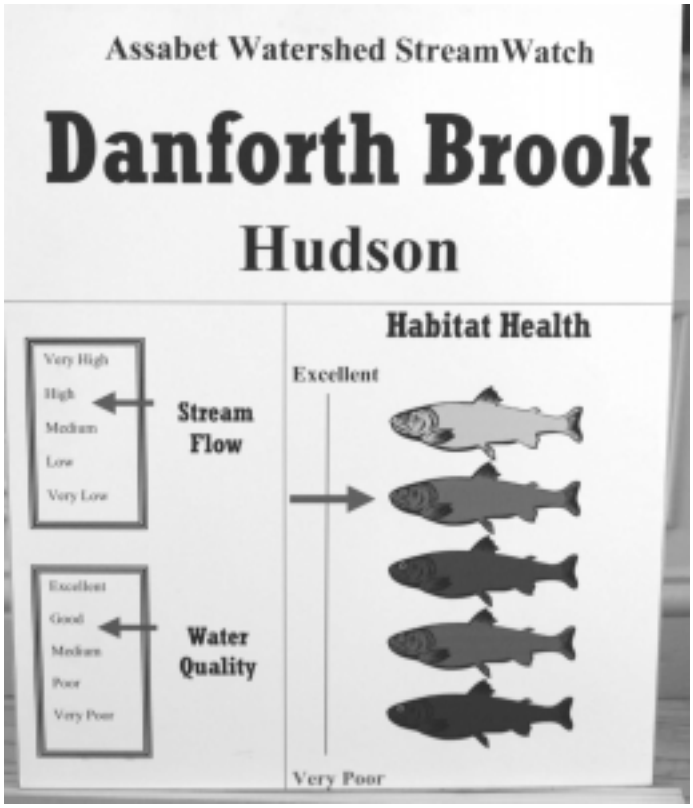
This project has been financed with Federal Funds from the Environmental Protection Agency (EPA) to the Massachusetts Department of Environmental Protection under an § 319 competitive grant.

The new pilot Lake/Watershed Stewardship Program kicks off this season with work in Blackstone River Watershed, beginning with a watershed survey of the Mill Brook Watershed in Worcester, which includes Indian Lake, Mill Brook, Salisbury Pond (left), and several smaller tributary streams. Photo courtesy of Terry Beaudoin (DEP).

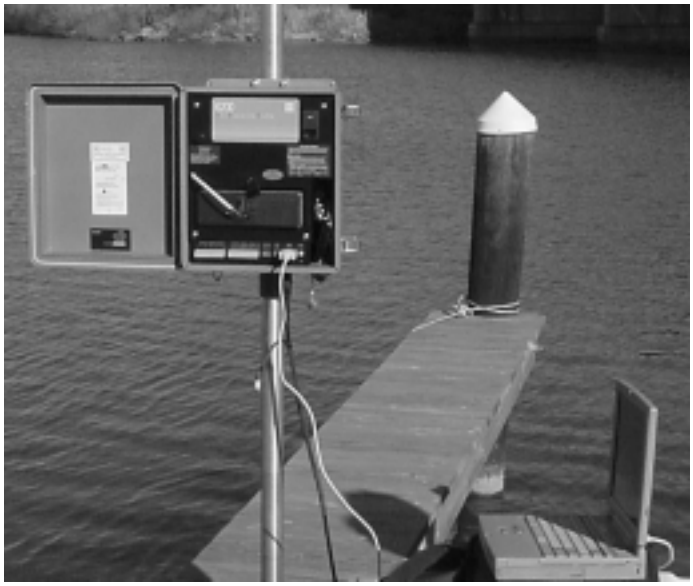
EPA EMPACT Grants Awarded to Local Watershed Associations and Partners

The U.S. Environmental Protection Agency (EPA) presented $350,000 for the Assabet Watershed Streamwatch Project. This project focus specifically on monitoring and evaluating fish habitat in the Assabet River tributaries to educate the public on water quality, flow volume and other river issues. Bob Varney, EPA's Region I Administrator, presented the award to the Assabet River Consortium whose partners include the towns of Hudson, Maynard, Marlborough, Northborough, Shrewsbury and Westborough, the Organization for the Assabet River, USGSs, the Massachusetts Division of Fish and Wildlife, and the Massachusetts Audubon Society. Pictured: Laurie Bennett, MA Audubon; Senator Pam Rezor, Paul Blazar, Julia Blatt (OAR), Bob Varney (EPA), Sharon McGregor (EOEA), Peter Weiskel (USGS), Sue Flint (OAR), Sue Beede (OAR) Photo by David Griffin, (OAR).

The Mystic River has many friends working diligently to improve the river. A key component to successful restoration is information. The recent award of a $360,000 EMPACT grant from the EPA will significantly increase the amount of information available on the daily conditions of the river. EPA Region 1 Administrator Bob Varney (center) recently presented Somerville's Mayor Dorothy Kelly Gay, Mystic River Watershed Association Director Grace Perez and Tufts University President Lawrence Bacow with their EMPACT Grant award for the work they will be doing collaboratively on the river. Also pictured are Congressman Michael Capuano, Representative Vincent Ciampa and the EOEA Watershed Initiative's Karl Honkonen. Photo courtesy of the Mystic River Watershed Association.



Stream flow and water quality measurements will be updated weekly for each tributary. The information will then be publicized via a 'Habitat Health' rating showing how healthy the stream is for native fish. The weekly data will be posted on signboards in the area, published in newspapers, and be available on the project web page. Additionally, expanded information will be available on the website www.assabetriver.org.



Tufts students designed this specialized monitoring equipment specifically for the Mystic River project using advanced sensor technology. The device will analyze and report water quality almost instantaneously. This continuous flow of data will be interpreted and made available to the public via cable television, a web site and dial-in phone messages. Photo courtesy of the Mystic River Watershed Association.

River Restore Update

River Restore Triage Team

The River Restore 'Triage Team' has been busy with more than a dozen dam site visits over the past four months where dam owners are considering dam removal or want to know how the river could be affected by removal. Though the size of the 'Team' varies from site to site, we consistently have representation from multiple state agencies, federal agencies, and local conservation commission and watershed association members. Recently, we have been working to finalize our Triage Team Dam Assessment Form and follow-up reporting methods.

Interesting patterns are emerging in the type of possible dam removal project sites we have been requested to visit. One type of site generally contains a dam that has been breached for years and contains only a remnant structure that is no longer an 'official' dam as defined by the Office of Dam Safety. Removal of these remnant structures can potentially move forward at a local level, sometimes only involving the local conservation commission. For example, the Massachusetts Audubon Society is moving forward with a restoration project in Barre involving a remnant dam.

Another type of project site is one where a dam has recently failed and the impoundment has been drawn down due to public safety concerns. An example of this type of site is on Third Herring Brook along the Norwell-Hanover town line. In this case, the brook and the associated wetland complex have, for the most part, restored themselves after a gate was opened in February 2001 due to active failure of the dam and spillway. The project at this site will continue restoration by removing the rest of the concrete spillway so that large storm events do not re-impound the stream and risk overtopping the remaining earthen embankment.

This dam breach is serving as a catalyst for evaluating all dams and culverts on Third Herring Brook to develop a strategy for returning alewives to their historic spawning grounds in Jacob's Pond. The strategy will be coordinated in partnership with River Restore, South Shore YMCA, North and South Rivers Watershed Association, Coastal Zone Management's Mass Bays Program, South Coastal Watershed Team, and GZA, Inc.

Of course, many of the dams that the triage team has visited are still intact and impounding water, yet no longer serve their original purpose, are close to failure, and/or the dam owner wants to restore the river and remove the dam. In these situations the Triage Team is most useful because we help to identify what type of information or study is needed to remove the dam safely and with the least impacts and most restoration benefits.

Study Update: U.S. Geological Survey (USGS) Sediment Screening Study

Through a 104(b)(3) grant awarded to River Restore by the Massachusetts Department of Environmental Protection (DEP), the U.S. Geological Survey (USGS) has developed sediment sampling and screening protocols to help determine the physical and chemical characteristics of sediments trapped behind dams. They developed these methods by sampling behind the Ballou and Silk Mill dams on Yokum Brook in Becket in the Westfield River watershed and behind Perryville Pond dam on the Dudley/Webster line on the French River.

At Perryville Pond, the testing detected elevated levels of contaminants (e.g. heavy metals, PCB's, and PAH's), along with a large volume of fine-grained sediments. A long-term multi-state solution will have to be developed to address the contamination levels and restore the river. However, DEM Dam Safety was able to direct funds available through the Massachusetts Watershed Initiative French/Quinebaug Team to implement a temporary repair of the earthen berm, effectively "buying time" for partners to find a solution.

The dams along Yokum Brook showed no elevated contaminants and the sediments in the impoundments are relatively large (e.g. cobbles and boulders) which means they can probably be allowed to naturally re-distribute in the stream when the dams are removed. This restoration will allow trout and salmon access to prime spawning habitat along the brook.

Summary: New England Meeting on Dams and Sediments

As shown in the Perryville Pond and Yokum Brook examples, there is no "one size fits all" when it comes to managing impounded sediments. Part of the 104(b)3 grant to River Restore allows us to explore and develop appropriate guidance for not only screening and sampling sediments, but also using appropriate thresholds to determine effects on aquatic and human health. Comparison with these thresholds informs the dam owner as to the options available to them to manage sediment – dredge and dispose, in-stream stabilization or isolation, and/or natural redistribution.

BEFORE ***AFTER***

Third Herring Brook at the South Shore YMCA, which regained its channel after the dam breach. Photo courtesy of GZA, Inc.

This past October, we had a great showing of approximately 40 participants at a meeting hosted by the Army Corps of Engineers and organized by River Restore and the National Oceanic and Atmospheric Administration (NOAA). Jim Turek of NOAA gave a great overview of many of the issues involved in testing and managing sediments when considering dam removal alternatives. Marc Zimmerman and Rob Breault of USGS described the protocols they are developing for screening sediments behind dams (see above). Jim MacBroom of Milone & MacBroom, Inc. shared his experiences with dam removal, the dynamics of how sediments are naturally transported through the riverine system, and how dams have disrupted this natural riverine function. We ended with panel discussions focusing on sampling, analysis, and evaluation of contaminated sediments. We heard details on various state policies and regulations from Steve Lipman (MA DEP) and Grace Levergood (NH Dept. of Envir. Services - DES). Assessing ecological risk was another important topic touched on by Ken Finkelstein (NOAA) and Matt Liebman (EPA). From these informative talks and discussions, it became apparent that current regulations and policies are not adequately addressing these sediment issues in the context of dam removal and river restoration. We plan to bring together many of the experts from across New England again in the spring to continue to map out a region-wide understanding of the complex issues associated with dam removal and sediments.

Cold Water Conservation, continued from page 1

glorious step-pools. Breaching Ballou Dam will also benefit the community by providing an outdoor classroom just a short walk from the Becket-Washington Elementary School.

The Yokum Brook project came together in the same manner as many restoration projects: a combination of careful planning, fortuitous timing, and coincidence.

In the spring of 2000, the Dam Decommissioning Task Force asked the Triage Team to visit sites that were priorities for dam safety and fisheries restoration. Yokum Brook was one of the Division of Fisheries and Wildlife's priorities for coldwater fisheries conservation.

At the site visit, we met with the Town Administrator and others who informed us of their responsibility to meet dam safety and fire suppression requirements at Ballou Dam. The adjacent elementary school was slated to be under renovation during the next two construction seasons – complete with a new sprinkler system. By the spring of 2001, we agreed to work together to find a common solution.

Progress Made Possible through Partnership

The adage "many hands make light work" is especially true in the context of dam removal. Successful river restoration projects involve many partners and resources.

Work completed to date and partner contributions include:

The **Town of Becket** has demonstrated their commitment to restoration of the brook and enhancement of fisheries habitat by offering funds originally allocated for dam repair as a match and agreeing to work in partnership to identify and fund an alternative water supply for fire protection purposes. The town has also demonstrated a commitment to providing ongoing community stewardship of Yokum Brook by involving the elementary school.

The **National Oceanic and Atmospheric Administration (NOAA)'s Community-Based Restoration Program** awarded the Town of Becket a grant of $50,000 toward project design and construction.

We welcome **Northeast Utilities** as our newest Yokum Brook partner, made possible through a donation of $25,000 to the **Corporate Wetlands Restoration Partnership (CWRP)**. The CWRP was launched in May 1999 by the Massachusetts Executive Office of Environmental Affairs, The Gillette Company, and the U.S. Environmental Protection Agency, and is managed by EOEA's Wetlands Restoration Program. This partnership was the first of its kind in the nation to encourage voluntary corporate participation in proactive wetlands restoration and includes aquatic restoration as well.

The **Riverways Programs** awarded a **Small Grant** to the Town of Becket, contributing $10,000 toward project design. **River Restore** has assisted the Town with grantwriting to secure additional funds.

The **U.S. Fish and Wildlife Service**, through a Cooperative Agreement with the Commonwealth of Massachusetts, provided $10,000 in seed monies to the project.

The **National Fish and Wildlife Foundation** (NFWF) has just announced an award of $40,000 to the Town of Becket. NFWF supports the conservation of native fish, wildlife, plants and their habitats by attracting diverse investments to conservation and encouraging locally supported stewardship on private and public lands. Congress created the Foundation in 1984 to benefit the conservation of fish, wildlife, plants and the habitat on which they depend. Sources to this NFWF grant include NOAA and the U.S. Fish and Wildlife Service.

The **U.S. Geological Survey**, through a Joint Funding Agreement with **the Department of Fisheries, Wildlife & Environmental Law Enforcement (DFWELE)**, sampled sediments impounded behind both dams and performed grain size analysis and bathymetry. This work, conducted at no cost to the Town, was funded by a 104(b)3 grant awarded to River Restore by **the Department of Environmental Protection (DEP)** and supplemented by the **Department of Environmental Management** and DFWELE monies.

The **DEP** conducted pre-dam removal surveys of Yokum Brook to document water quality, fish and macroinvertebrate populations.

Technical assistance has been provided by Laura Wildman of **American Rivers** and Jim MacCartney of **Trout Unlimited/National Park Service**.

Members of the **Taconic Chapter of Trout Unlimited** are supporting outreach, funding, and volunteer activities. They have sought funding to involve the elementary school in rearing and releasing salmon fry.

Leading the Team for project design, permitting, and construction is the Town's consultant, **Foresight Land Services** of Pittsfield. Foresight was part of the consultant team completing the breaching of Old Berkshire Mill Dam, the first River Restore project completed in Massachusetts, for Crane and Company of Dalton. Topographic surveys, base mapping and property line delineation, hydrology and hydraulic studies and wetland delineation are among the activities Foresight is conducting to support project design.

This year, the focus will be on finalizing design plans and moving into the environmental review and permitting phase of the project – stay tuned!

The Concord River in Lowell Welcomes Rafters, Herring

Each April, the Concord River teems with activity above and below the waterline as alewife struggle up and rafters barrel down its tumbling waters — in no small part due to the breaching of the Middlesex Dam in Downtown Lowell. The Middlesex dam, a large reinforced concrete structure that drowned a 20 foot drop in elevation, was breached during a flood in the mid 80's and left a riverbed filled with dangerous debris that virtually eliminated any opportunity for river recreation to be conducted safely.

Removing the debris from the breached dam resulted in further drops in elevation and created an opportunity to develop whitewater recreation in a completely urban environment. The free-flowing river has enabled the area to broaden the economic base of tourism at a time of the year when most people do not normally travel to national parks.

Since 1984 the Lowell Parks & Conservation Trust has taken down over 1,200 rafting passengers during the months of April and May in an effort to raise awareness of the important natural resource values the river continues to contribute to the community. The trip is coordinated by members and volunteers of the organization, and the revenue generated by the trips is used to build greenways, preserve the historic corridor of the river, and protect the urban river habitat for birds, anadromous fish, and other wildlife.

Continues, page 13

From the Department: DFWELE Land Program

Riverways highlights ongoing work of programs in the Department of Fisheries, Wildlife & Environmental Law Enforcement. These articles are in response to questions from our constituents.

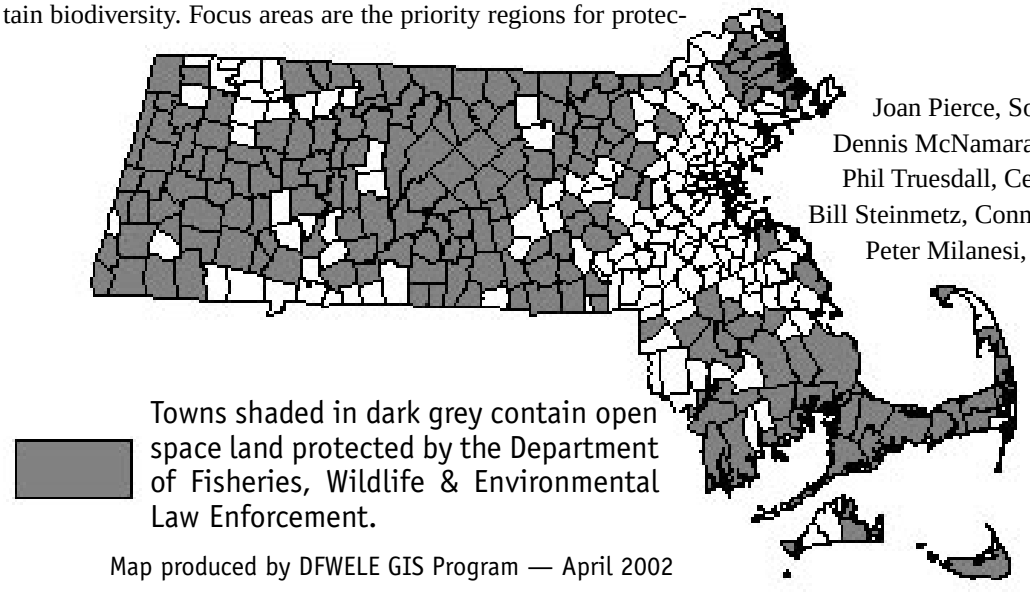
It seems to be a universal experience; a visit to the old neighborhood results in a degree of shock over the amount of change that has occurred. Maybe the elementary school is now condos and an office building's garage occupies the once wooded area cherished by the neighborhood children who climbed through the trees. Dramatic changes attract attention but how often do we notice or remember the lack of change? While it may not be as obvious as the changes development brings to the landscape, a long-standing effort by the Department to identify and protect significant habitats has been quietly succeeding so wooded areas, swamps, hillsides and marshes live on in more than someone's memories of childhood.

The Department's land protection efforts strive to protect viable and functioning indigenous ecosystems capable of supporting a network of native plants and animals.

Over the years the Lands Program has protected a range of native habitats and natural communities despite limited funding. Using sound science and the talents of a variety of experts, the Program has identified over 100 focus areas. These include areas of ecologically significant lands surrounded by adequate buffers to ensure long term survival of the natural community and maintain biodiversity. Focus areas are the priority regions for protection. The goal of the Program is to protect as much land as possible through fee acquisition or the purchase of conservation restrictions but this can be a complex undertaking. The focus areas are often a collection of many individual parcels under different ownership. Connecting with landowners, providing information about the importance of conserving a focus area's significant habitats, and investigating protection options is typically the longest part of the process.

Individuals and organizations are encouraged to contribute to the efforts of the Department to safeguard the special places of the Commonwealth. Groups or individuals interested in the nomination process or know of lands that may exemplify ecologically significant habitats are encouraged to contact the land agent in the local Wildlife District office. The Land Protection Program can also use help at the local level with outreach about the value of protecting our ecological heritage. The land agents and the Program are especially appreciative of the relationships local groups and individuals often have with landowners and the possibility of serving as a liaison to help arrange the crucial first contact with owners of focus area properties.

If you would like to know more about the program, please contact the land agent in your local Wildlife District. Their names and contact information is below.



Towns shaded in dark grey contain open space land protected by the Department of Fisheries, Wildlife & Environmental Law Enforcement.

Map produced by DFWELE GIS Program — April 2002

Joan Pierce, Southeast District 508/743-9066
Dennis McNamara, Northeast District 978/454-6460
Phil Truesdall, Central District 508/792-7270 x115
Bill Steinmetz, Connecticut Valley District 413/923-9323
Peter Milanesi, Western District 413/442-0047

Taunton Heritage River Program

The Taunton Heritage River Program commemorates the Taunton River, as it runs through time, through its communities and through the lives of the residents of the watershed. SRPEDD, the Southeastern Regional Planning and Economic Development District, is administering the Taunton Heritage River Program in partnership with EOEA, DEM and DFWELE, with Riverways Programs as the lead. Senator Pacheco of Taunton provided the initial vision for the program. A pilot for a future Heritage River Program for Massachusetts, the Taunton Heritage River Program recognizes the special characteristics of the Taunton River, its partners, its history and its cultural relationships.

Steering Committee

Because the heart of the Taunton Heritage River Program is the relationship between local partners and the river, the Steering Committee provides the base to bring key interests together with state partners. Representatives from Old Colony Historical Society, Historic Landscape Program (DEM), land trusts—Wildlands Trust of Southeastern Massachusetts and The Trustees of Reservations— Bristol County Tourism Council, the Chamber of Commerce of Fall River, the Taunton River Watershed Alliance, Taunton River Wild and Scenic River Study Committee, the Taunton River Team Leader, Riverways Programs, and SRPEDD all bring their talents and experience to the steering committee and the Taunton Heritage River Program.

Small Grants Program of the Taunton Heritage River Program

The Taunton Heritage River Program instituted small grants to enable partners - nonprofits and towns - to implement projects that benefit the Taunton River and its communities. After receiving project proposals in response to an RFR (request for responses) a technical review committee was assembled, and with the assistance of the state archeologist, all proposed project sites were visited. The visits were an important aspect of proposed review to determine project suitability, but also to insure valuable archeological sites and artifacts were not disturbed. Protection of these resources is important in the Taunton River Watershed because it is rich in Native American and industrial history. After evaluation, the Taunton Heritage River Program made the following awards:

Education, historical enrichment and ecotourism

• ***Middleboro/Lakeville Herring Fisheries Commission***, Implementation of a kiosk at Oliver Mill Park

Funds from the Taunton Heritage River Program will enable the Herring Fishery Commission to further its goal of educating the many visitors to the herring runs in the communities of Middleborough and Lakeville. A sturdy and handsome informational kiosk will be constructed using volunteer labor and materials funded by the Taunton Heritage River Program. The Kiosk will present information on the life cycle of the herring, historical heritage of the Oliver Mills site and the natural resource value of the park.

• ***Weir Corporation***, City of Taunton, Weir Riverfront Park

With the support of the Taunton Heritage River Program, the Weir Corporation (a nonprofit community redevelopment corporation) will be able to undertake Phase II of the Weir Riverfront Park. Working cooperatively with the City of Taunton and the Taunton Conservation Commission, the Weir Corporation will use these funds to build on its successful urban revitalization work. Phase II will extend the riverfront park, adding an additional pathway and a viewing area at the river's edge. Interpretive plaques will acknowledge the area's rich connections to the river and its industrial heritage. This continues the work of Phase I that turned vacant trash-strewn lots into a place for walking, picnicking and boating. This project highlights the Taunton River as a resource for recreation and a focus of economic revitalization.

• ***Green Futures, Inc.,*** Educational Programs

In order to reconnect urban residents to the Taunton River, Green Futures will conduct an educational program that draws from the arts, history, and recreation. Since its inception in 1995, this non-profit environmental advocacy group has actively worked to raise the awareness of the Taunton River for residents in communities from Fall River north to Taunton. With this funding Green Futures will run narrated riverboat and walking tours that focus on the cultural and natural resources of the river. The public will be invited to participate in a photo contest and exhibit, and a teaching guide highlighting river resources, will be developed. The mixed-media approach, including cable TV programming, will reach a broad audience and promote connections between riverfront communities.

Cultural Enrichment

• ***Natural Resources Trust of Bridgewater,*** Titicut Conservation Area

The Bridgewater Conservation Commission has joined with the Natural Resources Trust, a non-profit land trust, to develop a stewardship plan for conservation lands including the 32-acre Titicut Conservation Area. The Taunton Heritage River award will be used to hire a professional consultant to prepare a plan for the site that balances the recreational use of this property with protection

Over 50 residents and city and town officials attended the Awards Ceremony on the Taunton River at Weir Park in Taunton. As part of the Governor's Cabinet Day Ceremony, Senator Marc Pacheco (Taunton), Commissioner Peter Webber (DEM), Commissioner Dave Peters (DFWELE) and Riverways Programs Director, Joan Kimball presented awards. Photo by Marijoan Bull, SRPEDD.

of its historical resources. Located along the upper Taunton River, the site includes a boat launching area, white-pine campground area and a looped trail system. It is also a significant historical resource with ties to Native American settlement and the shipbuilding industry of the early 1800s. The grant funds will pay for benches, signage, and low-impact camping facilities to service the many scouting groups and local canoeists that visit the Titicut Conservation Area.

Public Access and Recreational Development

• ***Town of Freetown,*** Development of a Handicapped Accessible Walkway and Platform at Hathaway Park

The Town of Freetown will use this award to enhance residents' ability to enjoy the natural beauty of the shoreline along Assonet Bay. The bay is an inlet from the Taunton River that provides boaters with access to the scenic Assonet River. The Town will hire an engineer to design a handicapped accessible boardwalk at the shoreline edge. Walking along the boardwalk, visitors will get views to the Taunton River and a new appreciation for the natural beauty of the area. Interpretive signage will add to the experience, educating visitors about the natural habitat and the significance of the site to Native Americans.

Visioning Workshop

On March 16, the Taunton Heritage River Program brought together over 40 Taunton River Watershed residents for a visioning workshop. Members of Taunton River Watershed Alliance, the Taunton River Wild and Scenic Study, naturalists and archaeologists, historians, and city and town officials participated in the workshop. Participants ranged in age from 5 to 85 and represented communities from the headwaters to the mouth of the river. Organized by SRPEDD and the Steering Committee, the workshop provided a forum for sharing stories about the river, creating a vision for the future of the river, and networking. One unique goal of the workshop was to provide graphic artists with inspiration and visual images for the creation of a community-based logo, brochure and signage. Signage will be placed at heritage locations including the completed projects funded by the grant program.

Dancing Star, a Native American storyteller, told of the relationship between the Taunton River and her people saying that we believe that "The river is a great gift from the creator, and with that gift comes great responsibility."

Participants brought stories of seeing rare species on the river and experiencing joy at the return of osprey, bald eagles, seal, stripers, white perch and sturgeon. Many appreciate the river's history — in particular, the rich Native American history, the river's industrial history and the building of clipper ships in cities and towns along the river. It was noted that the Taunton River serves as a passageway for connecting the river to other ecosystems and other continents. A naturalist told of finding a monarch butterfly (banded in the Taunton River watershed) in Mexico and an historian talked about the clipper ships that left the river, taking bog iron and manufactured goods all over the world and returning to the river with more exotic products. People were seen as both a threat to the river as well as a valuable resource for it. While herring first brought settlers to the river, local people are now working to bring herring back.

People expressed gratitude to the river for teaching them about nature, for providing a sense of place and for providing their first connection to ecology. People told stories of their grandparents, parents and children on the river. In small breakout sessions, we heard the common threads:

- cherish the past, nurture the present, protect the river for dreams for the future.
- weave together the stories about the river, its wildlife and culture while respecting the integrity and protecting the beauty of the river.

As one participant said, "we are trying to reclaim our heritage, our history and our river."

Following the story telling session, participants joined with an environmental artist to express visually the meaning of the Taunton River. In addition to each of us using our bodies to express facets of the river in a living sculpture, we created mosaics out of cloth and other materials. Drawing from the stories about the river, the visioning statements, and the visual depictions of the river, graphic artists will design a logo for the signage and brochure describing the Taunton Heritage River Program. Graphic artist Jan Moscowitz, of Mooremoscowitz noted, "It was a fruitful day, we now have a much richer visual vocabulary for the river. This workshop let us hear from the people themselves what makes this river unique."

In closing, Senator Marc Pacheco emphasized that the Taunton Heritage River Program is a pilot for a larger effort — to extend a Massachusetts Heritage River Program across the state. In addition to the ongoing work in the watershed, Senator Pacheco highlighted the Steering Committee's next task to draft criteria for components of the larger state program. After congratulating the residents of the Taunton River watershed for their love of the river, their vision and hard work, Senator Pacheco joined SRPEDD and the Riverways Programs in thanking the hosts, the Bristol County Agricultural High School, and praised the school for its outstanding river museum and its special role in promoting the agricultural heritage associated with the Taunton River.

Rafters and Herring, continued from page 11

Over the past several years, the U.S. Fish and Wildlife Service, working collaboratively with the Massachusetts Division of Marine Fisheries and the Middleborough Herring Commission, has been stocking alewife in the Concord River. The Concord River and its tributaries offer the best opportunity to restore this historic anadromous fishery to the greater Merrimack River watershed. Alewife and American Shad that migrate into the Merrimack River are counted as they pass through fish "elevators" on the mainstem.

River Restore, the Riverways Small Grants Program and the Urban Rivers Program have awarded funds to the Lowell Parks and Conservation Trust and the City of Lowell, respectively, to help promote the whitewater rafting excursions, involve volunteers in observing and recording returning alewife, and track the journey taken by returning American Shad.

These activities will support ongoing efforts to bring people to the river for recreation and stewardship and develop and a broader constituency to protect the ecological health of the Concord River. All partners recognize the unique characteristics of the river area, the City of Lowell, and its historical importance through time that helped achieve its status as a National Park.

Further, these activities will help raise awareness of the changing role of the river in providing economic benefits to the region and benefits of healthy and accessible urban rivers.

For more information about taking this exciting urban whitewater adventure, trips can be arranged by calling (888) 375-1115.

Watershed Iniative Update

2002 Update of the Watershed Initiative

Massachusetts Watershed Initiative Strategic Implementation Plan

In 2001, the MWI Steering Committee (WISC) and the Executive Office of Environmental Affairs (EOEA) staff initiated a strategic planning and implementation process, at the request of the Secretary Bob Durand.

As a result, a "Discussion Draft" has been developed by an overview committee comprised of representatives from the WISC, EOEA and two facilitators from the Donahue Institute at the University of Massachusetts. This draft reflects extensive work done over the past 12 months by members of the WISC, EOEA, various watershed associations, state environmental agencies, Watershed Team Leaders and team members. The collected work contains six reports including feedback, comments and analyses of the MWI offered over recent years by informed and active members of the Massachusetts watershed community at large. The Discussion Draft Evaluation and Action Plan is largely a summary, compilation, and re-ordering of the findings of these source material.

Bob Durand, the Watershed Initiative, and the WISC (Watershed Initiative Steering Committee) are now engaged in the strategic planning process. Focus groups will be held at different locations throughout the state to provide information for the Strategic Implementation Plan.

The Riverways Programs has been a participant in the Watershed Initiative since 1993. We have seen a great deal of hard work and challenges. The always-evolving Watershed Initiative has tried a variety of things to implement this innovative idea. In our work with rivers, citizens and agencies, we have seen several significant changes brought to river protection through the Watershed Initiative.

¤ Under DEP's guidance, the five-year cycle was instituted on a watershed basis so that cumulative effects of Water Management Act permits and NPDES permits can be monitored.

¤ The Watershed Initiative provides opportunities for agencies, citizens and nonprofit groups to work together to protect and restore rivers, river resources and watersheds.

¤ The Watershed Teams bring players together on a regular basis leading to understanding of the issues in the watershed. At watershed team meetings and at other times, the Watershed Initiative has given agencies the ability to coordinate and talk with each other (something that was hit or miss before the Watershed Initiative).

¤ The Watershed Team projects have provided funds for additional monitoring of our resources, improved habitat, improved water quality in some watersheds, raised awareness and created watershed plans.

¤ Because of the Watershed Initiative, Stream Teams have more opportunities to have their voices heard by state agencies, and state agencies have more opportunities to understand local conditions.

2002 Work Plans: Watershed Initiative Work Plan Process

Every year, the Watershed Initiative Watershed Teams present their yearly work plans to the Interagency Work Plan Review Committee for review. The Teams spend the fall months developing priority projects for the next year's work plans. The work plans list priority projects that the Roundtable will be asked to fund from the Environmental Bond. The projects are intended to lead to problem solving and resource protection.

Members of the Interagency Work plan Review Committee (IWRC) determine which projects are appropriate for Watershed Initiative Roundtable Funding and which particular agency will provide oversight for projects. Joan Kimball and Pat Sheppard represent the Department of Fisheries, Wildlife & Environmental Law Enforcement (DFWELE) on the IWRC.

DFWELE Projects for 2002

Riverways Projects

Riverways agreed to manage projects that fit our mission and our staff skills. In addition, Riverways' Pat Sheppard provides fiscal assistance for all DFWELE projects. Riverways Programs projects for 2002 include:

Habitat Protection

Regional Herring Count: MA Audubon & partners: Parker River Clean Water Association, Ipswich River Watershed Association, and Eight Towns and the Bay (Mass Bays)

The goal of this project is to conduct a regional, intra-watershed project to monitor alewives and blueback herring in the

¤ Little River, Gloucester, spring 2002-3,

¤ Essex River/Alewife Brook, Essex, spring 2002-3,

¤ Ipswich River, Ipswich, spring 2002-3,

¤ Parker River, Newbury, spring 2002-3,

¤ Saugus River, spring 2003 with the Saugus River Watershed Council.

The Division of Marine Fisheries as well as Riverways Programs/Fishway Stewardship Program and Urban Rivers Program will participate.

Connecticut River Dam Removal Manual: GZA GeoEnvironmental, Inc.

The watershed team proposed this project to further their interest in promoting the return of anadromous fish. GZA will assemble a manual that not only details the regulatory and technical processes involved with removing a dam, but also addresses the social, cultural and environmental issues surrounding dam removal. This manual will be a companion piece to the Connecticut River Watershed Council's community based dam removal manual that will help owners decide when dam removal is appropriate. An advisory committee will oversee the development of the watershed team's Connecticut Dam Removal Manual.

Ipswich River Water Conservation Strategy: Ipswich River Watershed Association

The Ipswich River Watershed, which supplies drinking water to approximately 350,000 people within and outside of the watershed, often suffers from water shortages during portions of the year. In an effort to help resolve the conflict between consumptive water withdrawals versus the need to maintain streamflows for ecological, recreational and other values of the Ipswich River and its tributaries, the Ipswich River Watershed Association will

work to create and implement water conservation throughout the watershed over the next two years.

Recreation

Shawsheen River Watershed Recreational Map: Geosyntec Consultants

The map will focus on recreational opportunities on the Shawsheen River mainstem. In addition to facilitating the use of the river for recreational activities, the map will promote stewardship and encourage public interest in the ecological health of the watershed. In addition to a full color map, Geosyntec will create an interactive map on the websites of the Shawsheen River Watershed Team and the Shawsheen River Watershed Association.

Outreach

Ten Mile River Action Plan Outreach Poster: Yeager Communications

One of the primary goals of the Massachusetts Watershed Initiative is to increase public awareness of issues surrounding the health of the state's watersheds. In order to accomplish outreach about the Watershed team's plan and to inform the public about the team's efforts, Dan Yeager will produce a two-sided color poster outlining, in graphic and narrative format, the Team's Watershed Action Plan.

Connecticut River Storm Drain Stenciling Project Intern: Carie Banks

Storm Drain stenciling in the Connecticut River Watershed will, by increasing public awareness, help reduce non-point source pollution, one of the watershed's top priorities for 2002.

Water Quality

Hoosic River Environmental Art Project: MASS MoCA

The North and South branches of the Hoosic River flow through concrete flood control chutes in the towns of Adams and North Adams. These chutes have proven to be poor aquatic habitat and inhospitable and unattractive for the community. An EPA/DEP-funded assessment recently conducted by the Berkshire Regional Planning commission identified the extensive parking lot and roof surfaces at the Massachusetts Museum of Contemporary Art (MASS MoCA) complex in North Adams as a substantial contributor of pollution to the Hoosic River. MASS MoCA will work to generate designs for "environmental art" projects that will interact with the flowing water to help mitigate stormwater runoff and/or restore habitat to the channelized portions of the rivers, serve as artistic installations, and provide insight into river ecology.

Stream Teams

The Watershed Initiative has contributed partial funding to the Adopt-A-Stream Program for Stream Team development and implementation work. Since July, the Adopt-A-Stream Program has worked in 18 watersheds. Six new Stream Teams completed surveys in the fall and at least another nine are planned for this spring. The Adopt-A-Stream Program is continuing its outreach to new groups through presentations at local and regional conferences, working closely with Team Leaders and the program newsletter, the *Stream Advocate*.

The Watershed Initiative has also supported projects throughout the Department of Fisheries, Wildlife and Environmental Law Enforcement:

Public Access Board (PAB) Projects

Public Access Initiative

The Public Access Board project involves both the Parker River Watershed and the Housatonic River Watershed. In The Parker River Watershed Team, in cooperation with Massachusetts Riverways Program, the Public Access Board (PAB) and the Parker River Clean Water Association will complete an inventory and assessment of current boat access points and paddling obstacles (i.e. portages) along the Parker River. An evaluation of the need for new access for canoes and kayaks to these rivers will also be performed.

In the Housatonic River Watershed, the Team is working with PAB, Riverways and the Housatonic Valley Association (HVA) to identify and research potential sites for canoe and kayak access. Recently, a recreational area on Park Street in Stockbridge was pinpointed as a new access site, and sites in Sheffield and Lee are also being investigated. In addition to new sites, Decker Access in Lenox and Eisener Camp in Great Barrington are scheduled for improvements in access, parking and safety.

Division of Fisheries & Wildlife (DFW) Projects

Fish Monitoring

This project has been ongoing, gathering information on fisheries and habitat in watersheds entering into the assessment year of the Five-Year Watershed Cycle. The DFW staff will be sampling fish and collecting data for these year two watersheds: Housatonic, Charles, Nashua, and Connecticut. North Coastal and Hudson are also high priorities for the upcoming sampling season. A project of this scale could not have happened without the support of the Watershed Initiative.

DFW will be assessing and writing reports on findings of data collected through the Watershed Initiative in 2001 in watersheds including Westfield, Farmington, Concord, Taunton, South Coastal and Blackstone. Presentations of his findings will then be presented at the watershed team meetings. Thanks to past funding from the Watershed Iniative, DFW has been able to sample 65,000 fish in 500 sampling locations in 12 watersheds.

Westfield Blueback Herring Research

DFW in conjunction with US Fish and Wildlife Service has worked with the Westfield River Team to help reintroduce Atlantic salmon and other anadromous fish to the Westfield River. Blueback Herring occurs frequently in the Connecticut but are virtually absent in the Westfield. These agencies have relocated over 1000 of the Connecticut River herring into the Westfield River. As part of the Watershed Initiative Project, Kleinschmidt Associations was hired to trap and evaluate Blueback Herring during the months of September and October in the Westfield River. Information (including relative abundance, size, water and flow data and numbers of young of year) from this study will be translated into habitat values and baseline data for future studies. This is part of a two year study.

Division of Marine Fisheries (DMF) Projects

Anadromous Fish Coastwide Survey

This project was sponsored by consortium of all coastal basins (Buzzards Bay, Narragansett/Ten Mile, Cape Cod, South Coastal, North Coastal, Merrimac, Ipswich, Parker and Boston Harbor). The DMF study will cover each of the coastal watersheds from Rhode Island to New Hampshire, stream by steam and update a 1974 baseline report.

The intent of this project is to assess the current status of anadromous fisheries, fishways and impediments to fish migration and emigration. The data gathered during this project would be added to the GIS layer, providing a thorough overview of the status of the Commonwealth's anadromous fisheries. The information would feed into the management and work plan goals of DMF to enhance these fisheries.

Legislative Update

"An Act Providing for the Preservation and Improvement of the Environmental Assets of the Commonwealth", otherwise known as the **Environmental Bond Bill**, would provide the necessary capital authorizations for the Mass. Executive Office of Environmental Affairs (EOEA) and its departments for the next five years and beyond. The Bond would replenish capital authorizations that have been completely expended, will be depleted in the near future, or are necessary to fulfill the future goals and objectives of state environmental departments. Of interest to river/watershed protection/restoration activists is the fact that the bill contains line items that would provide funds for several river/watershed programs, including the EOEA Watershed Initiative, the Riverways Small Grants Program and the River Restore program, all of which in turn help support local river/watershed protection/restoration projects.

On February 13, 2002, the Environmental Bond Bill (now numbered **House Bill 4909**) was reported favorably from the House Committee on Long Term Debt and Capital Expenditures and was referred to the House Committee on Ways & Means. The Long Term Debt Committee's report reduced the bond to $625 million from the $750 million as originally filed by Governor Swift as Section 2F of H. 4213. In the meantime, a broad-based coalition composed of dozens of conservation, farm, forest, sporting, recreation, municipal, community preservation, urban, greenspace, trails, historic, coastal, water resource, tourism and environmental action groups calling itself the **Coalition for the Environmental Bond** has formed to act on the bill's behalf (As of press time over 175 organizations have signed on to this Coalition). The Coalition helped stage a successful rally in support of the Bond at the State House on March 13th attended by over 170 proponents and is working to restore full funding for the bill as it was originally drafted by EOEA.

The Mass. Land Trust Coalition has posted a wealth of materials on the Environmental Bond Bill at <http://www.massland.org/pages/tools/EnvBond/CoverPage.htm>, including a detailed comparison of the two versions of the Bill. Chris Hardy of Massachusetts Audubon [(617) 523-8448, <http://www.massaudubon.org>] and Pam DiBona of the Environmental League of Massachusetts [(617) 742-2553, <http://www.environmentalleague.org>] can also provide up-to-date information on the bill.

Major Water Infrastructure Bill Introduced

Hearings Begin on First Major Clean Water Act Reauthorization Since 1987

The Chairmen and Ranking Minority Members of both the full Senate Environment and Public Works Committee and Water Subcommittee joined in introducing long awaited water infrastructure legislation. The Water Investment Act (§ 1961) would authorize $35 billion over five years for the Clean Water State Revolving Loan Fund (SRF) and Drinking Water State Revolving Loan Fund (DWSRF). The bill, which constitutes the first major reauthorization of the Clean Water Act since 1987, will be the subject of both full EPW and Water Subcommittee hearings this week.

§ 1961 would provide a gradual increase in funding authorization levels for both loan funds. SRF is currently authorized at $1.35 billion but under the legislation would increase to $3.2 billion in 2003, eventually rising to $6 billion in 2007. Similarly, DWSRF would see its authorization level grow from the current $1 billion to $1.5 billion in 2003, culminating at $6 billion in 2007. Exact funding levels would have to be set by congressional appropriators each year. The measure also contains provisions to restructure both funds by increasing assistance for disadvantaged communities; requiring asset management plans; placing emphasis on consolidation, public-private partnerships, non-point source issues, and wetlands restoration.

This week's hearing will also examine other water-related legislation. In the House, two committees are holding hearings on water resource and infrastructure issues with an eye toward introducing their own legislation this spring. EPW Chairman James Jeffords (I-VT) plans to mark up the bill in March and hopes to have it ready for the full Senate before the Independence Day recess.

APA will consider a new policy guides on water resource management and wetlands at the National Delegate Assembly in Chicago this April. Once the new guides are ratified, APA plans to issue a position statement on this important legislation.

Resources

Grants

U.S. EPA Administrator Christine Todd Whitman announced this past January that the Bush Administration's FY03 budget will include **$21 million for a new EPA initiative to protect, preserve, and restore waterways across the country**. As part of this community-based initiative, the EPA will target up to 20 of the nation's most highly-valued watersheds for **grants**. EPA will be working cooperatively with state governors, tribes and other interested parties on this initiative. This program will also support local communities in their efforts to expand and improve existing protection measures with tools, training and technical assistance.

The text of the press release making this announcement is posted on-line at <http://www.epa.gov/epahome/headline4_012502.htm>. More details of this new initiative can be found at <http://www.epa.gov/owow/watershed/initiativefs.html>. Although it is unclear at this time which "community-based" entities might be eligible for the EPA grants, it is not too early for you to begin to mobilize resources for the effort to demonstrate why your watershed should be one of those targeted for the grant money.

The federal FY02 appropriations bill for the U.S. Department of Commerce (i.e. the NOAA Procurement, Acquisition and Construction account) includes a new funding item for a **Coastal and Estuarine Land Conservation Program** to acquire lands to further the goals of the Coastal Zone Management Program or National Estuarine Research Reserve System. An amount of $15.825 million is earmarked for acquisition projects in 14 states (including MA). Although the Secretary of Commerce still must issue guidelines for this program, targeted areas must have significant conservation, recreation, ecological, historical, or aesthetic values, or they must be threatened by conversion from their natural or recreational state to other uses. Additionally, the secretary shall distribute funds in consultation with the states's coastal zone managers or designee. Grants funded under this program shall require a 100-percent match from other sources. More information is avail on the use of this money in Massachusetts at <http://www.tpl.org/tier3_cd.cfm?content_item_id=6623&folder_id=260>.

& Grants

The **DEP Drinking Water Program** recently announced the availability of a fourth annual round of funding under its ***Wellhead Protection*** and ***Source Protection*** grants programs. The Request for Proposals (RFR) will be issued on May 1, with a due date for proposals of June 21st. Fact sheets describing each program's eligibility requirements, as well as descriptions of past grant recipients and other details, can be viewed at <http://www.state.ma.us/dep/brp/dws/grants.htm>. The RFRs will be available by hard copy or on-line at <http://www.comm-pass.com>. Contact Catherine Sarafinas (617-556-1070) or Kathy Romero (617-292-5727) if you have any questions or need more information. [FYI, the Trust for Public Land has been very involved in promoting source water land protection; several articles on the subject can be found on TPL's web site: <http://www.tpl.org>.

Calendar

River Network's third annual ***River Rally*** will take place at the Holiday Inn SunSpree Resort in Asheville, NC from **May 17-21**. It is the only comprehensive conference that offers workshops for all those working to understand, restore and protect rivers. Staff, volunteers and board members, experienced and inexperienced, will benefit from workshops in organizational development, watershed science, self-care and much more. This year's event will be surrounded by numerous activities, over 30 art galleries, and the nearby French Broad, Pigeon, and Nantahala rivers. Visit the River Network web site at <http://www.rivernetwork.org>, e-mail <riverrally@rivernetwork.org> or contact Pat Munoz at (202) 364-2550 for the most current Rally information.

The **New England Interstate Water Pollution Contol Commission** (NEIWPCC) is hosting the ***13th Annual Nonpoint Source Conference*** from **May 21-23** in Boothbay Harbor, ME. This 3-day meeting consists of a keynote address, workshop, field trip, over 20 different presentations in plenary and concurrent sessions, display tables, and time for informal discussion and exchanges. This year's meeting features a workshop and several sessions on the theme of social marketing to influence behaviors to control NPS pollution. In addition, it will feature presentations on all facets of watershed management, including implementing best management practices; using innovative methods to detect and control NPS pollution; estimating NPS pollutant load reductions; and developing NPS surveys and management plans. A field trip will showcase a variety of BMPs associated with a lake watershed protection project. Further information is available on NEIWPCC's web site (<http://www.neiwpcc.org/events.html>) or by contacting Jennifer Hunter at (978) 323-7929 or <jhunter@neiwpcc.org>.

Rhode Island Sea Grant is hosting a workshop on ***water quantity*** on **May 22nd** in Narragansett, RI. This workshop will provide an overview of how water quantity is managed in Rhode Island and summarize current studies. Contact Meg Kerr at <mkerr@gso.uri.edu> for more information.

The 2002 annual meeting of the **New England Chapter** of the **North American Lake Management Society** is scheduled to take place on **May 31 – June 1** at Springfield College in Springfield, MA. Workshops/presentations include: Aquatic Plant, algae and fish identification, ecology and management; Lake management methods with local tour; Volunteer monitoring training; Use of GIS for lake assessment and management; Starting and maintaining an effective lake and watershed association; Developing and passing legislation intended to help lakes; The cost of managing - or not managing - lakes, and where to find funding; Useful tools for lake assessment - demonstrations of equipment and gadgets for lake monitors; The link between watershed management and lake quality - managing the whole resource; and TMDLs and lakes - demystifying this program to help our lakes and more. More information is available from Elizabeth Herron at <emh@uri.edu>, (401) 874-4552 or on-line at <http://www.nalms.org/necnalms/>.

The **Environmental Law Center** of the **Vermont Law School** in So. Royalton, VT is offering a course on the ***Clean Water Act*** from **June 17-27** and ***Conservation Land Trusts*** on Fridays from **June 7-August 2**. Both classes are open to law and non-law students for auditing or academic credit. More info is available at <http://www.vermontlaw.edu/community/elc/elcsucou01.cfm> or by calling (800) 227-1395 ext.2201.

Last but not least, **River Network** maintains an extensive on-line calendar of river, watershed and/or environmental events at <http://www.rivernetwork.org/interact/specialevents.cfm>.

Books

Written by the Conservation Law Foundation (CLF) and the Vermont Forum on Sprawl, ***Community Rules: A New England Guide to Smart Growth Strategies*** is a guidebook for volunteer board members, planners, concerned citizens and others who want to achieve smart growth in their communities through better planning, zoning and permitting. Accessible and authoritative, ***Community Rules*** is chock full of examples of communities in New England and elsewhere that have laid the groundwork for smart growth through sensible planning, zoning and other strategies. ***Community Rules*** shows how local regulations can be put to use to: steer pedestrian-friendly, mixed-use development into town centers and new growth centers; sustain farming and forestry lands; tame "big box" retail development; protect natural resources, and much more. ***Community Rules*** ($25/copy, $20/copy for bulk orders or CLF members) can be ordered directly from CLF by calling (800) 370-0697 or on-line at <http://www.clf.org>.

The fifth revised edition of ***Land Conservation Options: A Guide for Massachusetts Landowners*** is now available from The Trustees of Reservations and Essex County Greenbelt Association. Written for landowners, their tax advisors and attorneys, land conservation professionals, and anyone concerned with saving the special features of the Massachusetts landscape, this 38 page, 8" x 11" illustrated booklet revises the 1989 pamphlet, Land Conservation Methods and Their Tax Advantages. The 2001 revision includes up-to-date examples of land protection projects, planning and tax information for gifts of land and conservation restrictions, and reflects the 1997 Taxpayer Relief Act and federal and Massachusetts estate tax law. Notes, a glossary, and sources of information are included. ***Land Conservation Options*** is available for $5 each plus $1.50 Shipping & Handling ($4.00 each for quantities of 21 or more) from Andrea Pullo, The Trustees of Reservations, 572 Essex Street, Beverly, MA 01915, (978) 921-1944 x1867, <apullo@ttor.org>.

Please make checks payable to The Trustees of Reservations.

Water Wars: Privatization, Pollution and Profit is the title of a new book by Vandana Shiva, who has been described as "the world's most prominent radical scientist". According to Shiva, while drought and desertification are intensifying around the world, corporations are

aggressively converting free-flowing water into bottled profits. ***Water Wars*** presents the stories of activists who are fighting corporate maneuvers to commodify water for private gain at the expense of public and environmental welfare. ***Water Wars*** is available from its publisher, South End Press [<http://www.southendpress.org>, (800) 533-8478].

On-line Resources

At the **U.S. EPA** website at <http://www.epa.gov/owow/protecting/> you can read (in .pdf format) an on-line version of a detailed and informative document entitled ***Protecting and Restoring America's Watersheds: Status, Trends and Initiatives in Watershed Management***. This report describes recent successes and ongoing barriers to effectively using the watershed approach to manage the quality of the nation's water. It brings together the ideas of local stakeholders, government employees, and academic evaluators who assess the current state of watershed management and suggest recommendations for improvement in areas such as awareness, monitoring and research, funding, and technical assistance.

The recently completed ***New York State Stormwater Management Design Manual*** provides a general overview on how to size, design, select, and locate stormwater management practices at a development site to comply with NY State stormwater performance standards. Prepared by the nonprofit **Center for Watershed Protection** (http://www.cwp.org), this manual is a key component of NY's Phase II State Pollution Discharge Elimination System (SPDES) general permit for stormwater runoff from construction activities from all sizes of disturbance. The manual can be found at <http://www.dec.state.ny.us/website/dow/swmanual/swmanual.html> and can be downloaded for free.

Want to know whether or not your local river or stream meets state and federal water quality standards? The Mass. DEP website (at <http://www.state.ma.us/dep/brp/wm/wmpubs.htm#wqa>) now provides on-line access to **surface water quality assessment reports**, which it has already completed for about a dozen of the state's watersheds, with more reports in preparation and soon to go on-line. These (for the most part) highly informative and user-friendly reports go into considerable narrative and tabular detail on the water quality conditions of the mainstem and many tributaries within each assessed watershed. Where water quality (**and**, increasingly, **quantity**) problems are identified, the reports typically provide the known (or suspected) cause(s) and source(s) of the problem along with detailed recommendations for mitigating the problem, many of which can be carried out by watershed organizations and stream teams in partnership with community officials, local residents and/or businesses. Sometimes local watershed associations (like the **Hoosic River Watershed Association**, <http://www.hoorwa.org>) provide direct links to these reports from their own web pages. Hard copies of these reports are obtainable from DEP's Watershed Management Program in Worcester [Rick McVoy, (508) 767-2877, <Richard.mcvoy@state.ma.us>].

Non-Government On-line Resources

American Rivers' Hydropower Reform Information Kit

<http://www.amrivers.org/hydropowerdamreform/hydropowerreform.htm>

This information kit provides information on why and how to modify hydropower operations to help restore natural flow regimes in rivers as well as how to make up any difference in lost power generation through more efficient electricity use.

Massachusetts Community Water Watch

<http://www.waterwatchonline.org/ma>

Run as a joint program between **AmeriCorps** and the **MassPIRG** Education Fund, Mass. Community Water Watch works to organize and empower students and community members to address water quality problems in Massachusetts' urban areas through education and service. This web page provides detailed information on the nature and locations of the program's work as well as opportunities to get involved with upcoming river cleanups, stream monitoring or education events.

Massachusetts Land Trust Coalition (MLTC) <http://www.massland.org>

The MLTC is a "one-stop shop" for all matters pertaining to the thriving land trust community in Massachusetts and beyond. The MLTC's web page provides links to or other contact information for most active land trusts in the state. The MLTC also serves as a unified advocate for land conservation and actively supports statewide initiatives promoting land protection, such as the **Environmental Bond Bill** (see the Legislative Update section of this newsletter for more details). MLTC's web page hosts the **Coalition for the Environmental Bond** and related information on the current status of the bill. The MLTC also hosts a highly informative listserv where land conservationists seek and give advice on all aspects of land trust organization and activity. You can subscribe to this listserv and/or look through an archive of past messages at <http://www.massland.org/mailman/listinfo/massland>. FYI, the **Massachusetts Watershed Coalition** maintains a similar listserv: go to <http://www.topica.com/lists/mwc-list@igc.topica.com/> to subscribe and/or to read past posted messages. This is where many time-sensitive items suitable for inclusion in the Riverways Newsletter's Resources and Grants section but came out between our newsletter issues get posted first.

River Network's Environmental Health Survey

<http://www.rivernetwork.org/health/>

River Network is a national organization that works to help people organize to protect and restore rivers, watersheds and community health. The organization is building an important national registry of communities with environmental health problems. If your community or a community you know suspect that health problems are being caused by contaminated water and/or fish, please go to the web page above to complete a brief survey (it takes about 10 minutes). Survey participants are automatically be entered in a drawing for great kayaks.

River Revival

<http://irn.org/revival/decom/index.html>

River Revival, a project of the Berkeley, CA-based **International Rivers Network** (<http://www.irn.org>), seeks to promote riverine restoration through the decommissioning, breaching and/or removal of dams throughout the world. River Revival puts out a free monthly on-line newsletter providing up-to-date information on dam removal proposals and projects. The rate of dam removal in the U.S. now outpaces new dam construction, and River Revival seeks to accelerate this trend here and elsewhere. You can also add your organization's name and URL to the *Living Rivers* Coalition and River Revival database as well as get on a dam removal activist e-mail alert list at this web site.

Rivers Foundation of the Americas (RFA) <http://www.riversfoundation.org>

Founded two years ago by (former Mass.) river activist Peter Lavigne, who describes RFA as an "international community foundation", the Rivers Foundation's mission is to promote and fund the protection and restoration of rivers and their watersheds in North, Central and South America. This mission is based on three principles: rivers and their watersheds are the lifeblood of the earth; restoring the health of our rivers requires a systems perspective; and focusing on the Americas will help reached underserved communities such as indigenous peoples and developing democracies. RFA provides grants for innovative river restoration and protection projects undertaken by existing environmental groups.

Rivers: Studies in the Science, Environmental Policy and Law of Instream Flow

<http://www.instreamflow.com>

Established in 1990, ***Rivers*** is a refereed quarterly publication that offers an interdisciplinary forum for research and professional literature addressing the issues of instream flow. Manuscripts that relate to instream flow in North America or that offer a strong transnational instream flow application are encouraged. The journal's central focus on research findings, policy analyses, and practical management experiences provides a wide range of information for the instream flow specialist confronted with technical and political problems in the management of instream uses of water. In addition to research and management articles, *Rivers* features a legal developments section which provides insightful analyses regarding the legal issues of cases, statutes, and rulings that impact instream flow; reviews of government and other publications that highlight useful "gray literature" in an attempt to bring it into the mainstream, and book reviews which probe yet another dimension of the water resources arena by identifying and evaluating relevant publications. At the *Rivers* website you can read abstracts of past articles and order reprints of the full text ($12-14) as well as subscribe to future issues of the journal ($56/volume).

Save Tabs to Save Rivers

<http://www.amrivers.org/bluesky/>

American Rivers has partnered with the Blue Sky beverage company so that from now until 10/31/02, for every blue can tab mailed to Blue Sky, American Rivers receives 10¢. The local rivers group submitting the most tabs will receive a new Necky kayak and $500 worth of river gear.

Stormwater Magazine

<http://www.stormh20.com>

Stormwater Magazine is a great resource for those interested in learning the latest on stormwater management policies, regulations, "BMPs" (best management practices), etc. The Nov./Dec/2001 issue, for example, carried a long and informative article on "daylighting" buried streams (<http://www.forester.net/sw_0111_daylighting.html>) submitted by Richard Pinkham of the Rocky Mountain Institute. The complete text of this and other articles are posted on-line; if you prefer receiving your own hard copy, you can sign up for a complimentary subscription to Stormwater Magazine at <http://www.forester.net/sw_subscribe.html>. (Speaking of "daylighting", you can read a Boston Globe story about the successful daylighting of a 3,000-foot section of the **Neponset River** next to the new Patriots football stadium at <http://www.boston.com/news/packages/patriots/stories/042001.htm>).

Swimming Holes in Massachusetts

<http://www.swimmingholes.org/ma.html>

Maintained as a fun project by webmaster/author Tim Hillegass, this web page provides descriptions of and directions to over two dozen swimming holes in the Commonwealth, along with hundreds of others throughout the Northeast and elsewhere.

TopoZone

<http://www.topozone.com>

The TopoZone website provides on-line access to every USGS 1:100,000, 1:63,360, 1:25,000, and 1:24,000 scale topographic map for the entire United States. To get started, simply type the name of the geographical feature or location you're looking for into the search box; then you can zoom in or out and recenter the map to suit your needs. You can view the maps on-line for free or print and/or download your own customized topo maps (for a fee).

Imperiled Rivers

<http://www.massaudubon.org/News_&_Action/Rivers/imperiled_riv.html>

Last but not least, **Mass. Audubon** (with a grant from the **MA Environmental Trust**) has just unveiled a great new **Imperiled Rivers** web page about the threats to rivers from human activities (such as water withdrawals from streamside wells) that alter natural flow regimes.

Our Mission

The Mission of the Riverways Programs is to promote the restoration and protection of the ecological integrity of the Commonwealth's rivers and adjacent lands. Recognizing the uniquely important role of rivers in the state's ecology, the Department initiated the Riverways Programs in 1987.

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Tom Christopher,
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Eileen Goldberg,
Grants Administrator 626-1546
Margaret Kearns,
Watershed Ecologist 626-1533
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INSIDE!!!
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